CLAIMS

What is claimed is:

1. A method of arbitrating the selection of engines between a local engine and a network-based engine in a mobile communication network for voice recognition or text conversion, comprising the steps of:

determining at least one factor among an available bandwidth on a given channel, a signal quality on the given channel, a latency indication, a desired application need, a cost factor, a background environment indication, and a number of unsuccessful attempts on the given channel; and

automatically selecting one among the local engine and the network-based engine based upon the at least one factor determined when performing at least one among voice recognition and text conversion.

2. The method of claim 1, wherein the step of determining the available bandwidth comprises the step of detecting the available bandwidth at a given time period and the step of automatically selecting comprises the step of providing a recommended suggestion among the local engine and the network-based engine to a dialog manager for selection by a user.

3. The method of claim 1, wherein the step of determining the signal quality comprises the step of measuring signal strength between a portable communication unit and a base station.

4. The method of claim 3, wherein the step of automatically selecting comprises the step of weighting the selection for the local engine in a weak signal environment and weighting the selection for the network-based engine in a strong signal environment wherein the weak signal environment or the strong signal environment is determined using at least one threshold value.

5. The method of claim 1, wherein the step of determining the cost factor comprises the step of determining a cost associated with communication in at least one among a predetermined number of networks.

6. The method of claim 1, wherein the step of determining the latency indication comprises the step of measuring a delay that the mobile communication network experiences to process a request compared to a predetermined threshold.

7. The method of claim 1, wherein the step of determining the background environment indication comprises the step of measuring a background noise level compared to a threshold level of noise.

8. The method of claim 1, wherein the step of determining the number of unsuccessful attempts comprises the step of accounting for the number of unsuccessful attempts in voice recognition in comparison to a predetermined number.

9. The method of claim 1, wherein the step of determining the desired application need comprises the step of determining at least one among a quality level of processing required, a speed requirement, and a grammar and language dictionary requirement.

10. The method of claim 1, wherein the method further comprises the step of using the automatically selected engine for performing at least one of the functions of voice recognition and text conversion.

11. A mobile communication system having an arbitrated selection between a local engine and a network-based engine for voice recognition or text conversion, comprising:

at least one remote server having the network-based engine;

a portable communication unit having the local engine and a processor, wherein the processor is programmed to:

determine at least one factor among an available bandwidth on a given channel, a signal quality on the given channel, a latency indication, a desired application need, a cost factor, a background environment indication, and a number of unsuccessful attempts on the given channel; and

automatically select one among the local engine and the network-based engine based upon the at least one factor determined when performing at least one among voice recognition and text conversion.

12. The system of claim 11, wherein the processor is further programmed to determine the available bandwidth by detecting the available bandwidth at a given time period and to automatically select by providing a recommended suggestion among the local engine and the network-based engine to a dialog manager for selection by a user.

13. The system of claim 11, wherein the processor is further programmed to determine the signal quality by measuring signal strength between a portable communication unit and a base station.

14. The system of claim 13, wherein processor is further programmed to automatically select by weighting the selection for the local engine in a weak signal environment and weighting the selection for the network-based engine in a strong signal environment wherein the weak signal environment or the strong signal environment is determined using at least one threshold value.

15. The system of claim 11, wherein the processor is further programmed to determine at least one among the cost factor, the latency indication, the background environment indication or the number of unsuccessful attempts by respectively determining a cost associated with communication in at least one among a predetermined number of networks, measuring a delay that the mobile communication network experiences to process a request compared to a predetermined threshold, measuring a background noise level compared to a threshold level of noise or accounting for the number of unsuccessful attempts in voice recognition in comparison to a predetermined number.

16. The system of claim 11, wherein the processor is further programmed to determine the desired application need by determining at least one among a quality level of processing required, a speed requirement, and a grammar and language dictionary requirement.

17. A mobile communication system having an arbitrated selection between a local engine and a network-based engine for voice recognition or text conversion, comprising:

at least one remote server having the network-based engine and a remote processor;

a portable communication unit having the local engine and a local processor, wherein at least one among the remote processor and the local processor is programmed to:

determine at least one factor among an available bandwidth on a given channel, a signal quality on the given channel, a latency indication, a desired application need, a cost factor, a background environment indication, a number of unsuccessful attempts on the given channel, and a server traffic condition; and

automatically select one among the local engine and the network-based engine based upon the at least one factor determined when performing at least one among voice recognition and text conversion.

18. A mobile communication unit that arbitrates a selection between a local engine and a network-based engine for voice recognition or text conversion, comprising:
a transceiver unit coupled to a processor and a local engine, the transceiver unit being in communication with a remote server having the network-based engine, wherein the processor is programmed to:

determine at least one factor among an available bandwidth on a given channel, a signal quality on the given channel, a latency indication, a desired application need, a cost factor, a background environment indication, and a number of unsuccessful attempts on the given channel; and

automatically select one among the local engine and the network-based engine based upon the at least one factor determined when performing at least one among voice recognition and text conversion.

19. The mobile communication unit of claim 18, wherein the processor is further programmed to determine the available bandwidth by detecting the available bandwidth at a given time period and to automatically select by providing a recommended suggestion among the local engine and the network-based engine to a dialog manager for selection by a user.

20. The mobile communication unit of claim 18, wherein the processor is further programmed to determine the signal quality by measuring signal strength between a portable communication unit and a base station.

21. The mobile communication unit of claim 20, wherein processor is further programmed to automatically select by weighting the selection for the local engine in a weak signal environment and weighting the selection for the network-based engine in a strong signal environment wherein the weak signal environment or the strong signal environment is determined using at least one threshold value.

22. The mobile communication unit of claim 18, wherein the processor is further programmed to determine at least one among the cost factor, the latency indication, the background environment indication or the number of unsuccessful attempts by respectively determining a cost associated with communication in at least one among a predetermined number of networks, measuring a delay that the mobile communication network experiences to process a request compared to a predetermined threshold, measuring a background noise level compared to a threshold level of noise or accounting for the number of unsuccessful attempts in voice recognition in comparison to a predetermined number.

23. The mobile communication unit of claim 18, wherein the processor is further programmed to determine the desired application need by determining at least one among a quality level of processing required, a speed requirement, and a grammar and language dictionary requirement.